



Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

good of us; and certainly if they were so disposed, they would now have a fine subject in the present excellent condition of our roads, in the generality of our mail and stage conveyances, as there cannot be better travelling in any country than there is in Ireland at present; and comparatively speaking, not one half of the accidents occur in our mail and stage coach conveyances that do in England. Were English travellers aware of this, and of the many fine scenes which are to be met with in the country, and in some way certain that they would not be murdered while coming here, I have no doubt we should have many more from England and Scotland, now that the conveyance by steam across the water is so cheap, and at the same time so expeditious and so certain. As nothing very material occurred during our next stage, and as I have at present given your readers quantum sufficit of my rambles for one number of your journal, I shall defer the remainder till a future opportunity. And am, Sir, yours, &c.,

ROBIN RUNABOUT

SIMPLE SCIENCE—LEAD.

Lead is the softest of all the metals; it is malleable and ductile, but possesses so little tenacity that a wire of the one hundred and twentieth part of an inch is not capable of supporting more than eighteen pounds weight without breaking. Lead and many of its uses were known to the ancients, but it was not thought, until chemical research discovered it, that it was poisonous. So far from entertaining this idea, the Romans in the time of Augustus, conveyed the water for their city in leaden pipes, without imagining that such a conveyance rendered it unwholesome; and so lately as 1783, there was a treatise printed, recommending the use of lead to preserve wines from acidity.

Although lead has the property of imparting a saccharine taste to substances with which it is mixed, some of our wine merchants little suspected, when they contaminated their wines with it, that they were distributing a slow poison to their customers. Vats of lead have been used in some cider counties, and have produced incalculable mischief. What is called the Devonshire colic, is occasioned by this practice, and is identified with the colic of the plumbers, painters, and white-lead manufacturers. A person may satisfy himself of the unwholesome nature of leaden cisterns to hold water for culinary purposes, by examining the internal surface of such vessels; for if the water has stood in them for several days undisturbed, a small coating of white oxide will be observed just at the upper edge of the water. On every fresh addition of water this oxide is washed off, and if there be the slightest degree of acidity in the vessel, it will be dissolved in the water, and thus an insidious poison will be conveyed into the stomach. The Romans sheathed the bottom of their ships with this metal, fastened by nails made of bronze; and in a state of ceruse, it was in great respect among their ladies as a cosmetic.

Lead is eleven and a half times heavier than water, and is found abundantly in Scotland, Northumberland, Durham, Derbyshire, and Ireland, and many other parts of the world. It is usually alloyed with a portion of silver, and in the primitive slate mountains, from fifty to one hundred and fifty ounces of silver are generally found in a ton of lead. It is employed to cover buildings and mixed with antimony forms printer's types. From it is manufactured many useful pigments, the most noted of which, is the white lead used in painting: the manufacture of this article is conducted in the following manner: a number of earthen crucibles holding from three to six quarts each, nearly filled with vinegar, in hot-beds of tan, and upon these crucibles thin sheets of lead rolled up in coils are placed, one coil over each crucible. The heat of the bed occasions the vinegar to rise in vapour, and this attaches itself to, and combines with the lead, forming a white crust of considerable depth; at a certain time this is scraped off and the coils of lead replaced: in this manner the operation goes on until all the metal is used—the produce is afterwards ground and washed for sale.

Sheet lead is made by suffering the melted metal to run out of a box through a long horizontal slit, upon a table prepared for the purpose, while the box is drawn by appropriate ropes and pulleys along the table, leaving the

melted lead behind it in the desired form to congeal. The lead thus cast is passed between two iron rollers, placed at such a distance from each other as will reduce the lead to the desired thickness.

Lead is used in the finer kind of glass, in order to make it bear sudden changes of heat and cold better; also to give it a proper degree of weight, a susceptibility of being cut without breaking, a greater power of refracting rays of light, and a capacity to bear a higher polish. Notwithstanding, lead is seldom used in plate or crown glass, as it always renders glass softer and more liable to be defaced by hard substances.

The manufacture of small shot is curious. In melting the lead a small quantity of arsenic is used, which disposes it to run into spherical drops. When melted it is poured into a cylinder whose circumference is pierced with holes; the lead streaming through the holes divide into drops, which fall into water where they congeal.—They are not all spherical, therefore, those that are, must be separated by an ingenious contrivance. The whole is sifted on the upper end of a long smooth inclined plane, and the grains roll down to the lower end. But the pear-like shape of the bad grains, makes them roll down irregularly, and they waddle as it were to one side, while the round ones run straight down, and are afterwards sorted into various sizes with sieves. The manufacturers of the patent shot have fixed their furnace at the top of a tower one hundred feet high, and so procure a much greater number of spherical grains by letting the melted lead fall into water from this height, as the shot is gradually cooled before it reaches the water.

E. B.

HIGHLAND HEROISM.

Roderick Mackenzie, a young gentleman of the north of Scotland, nearly of the same age with Prince Charles, and who strongly resembled him in person, was one of the many who knew of the Pretender's retreats, while the British government set a price upon his head, and the British soldiers hunted him through the realms of his fathers; and he was one of the few who were permitted to continue in his train, and who assisted in his numerous escapes. One day while the prince was sitting with his little band of faithful friends, in a highland cottage, the alarm was given that troops were closing around it. Escape was impossible, but he was forcibly carried by the party into a hiding place, and young Mackenzie remained firm in his stead. When the soldiers had burst the door, he rose, and walked calmly up to them, saying "I know whom you want—there—stab the son of your King!"—and he threw his plaid off his breast. Their swords were instantly through his gallant heart! They hacked off his head, threw it into a sack, and set off to present it, a meet and acceptable offering to their Duke. At Edinburgh, it was thought proper to ascertain that it was really the prince's head, and Robert Morrison, his barber, was sent for to identify it. Fainting with horror, the poor man was shown this shocking spectacle. After examining it, he became satisfied, that it was not the head of his master; but, he had the presence of mind to conceal his feelings, and said, that although he was not able to swear to the identity of the head, in that situation, the resemblance was so strong, no person could doubt that it was the head of Prince Charles. This evidence satisfied the butchers for the time; and, the fury of the pursuit abating, the prince escaped to France. What his feelings were on returning from his hiding place in the hut, and finding the mangled body of his friend, generous hearts may imagine, but few would be able to describe.

An anecdote is told of General Wolfe, that he was out with a party of friends in a boat, the day before the battle of Quebec. It was a beautiful summer's evening, and the conversation turned to Gray's "Elegy in a Country Churchyard," which was just then published. Wolfe repeated the lines, "For who to dumb forgetfulness a prey," &c. with enthusiasm, and said, "I would rather be the author of those lines than beat the French to-morrow." He did beat the French, and was himself killed the next day.